Geometry honors

Problem sets

**PS 8:**

*Find the area of each figure.*



1. rectangle 2. rectangle º 3.



º





4. 5.

º

6. An equilateral triangle with sides 8 ft 7. An isosceles triangle with sides 10, 10 and 16

8. A parallelogram with a 45º angle and 9. A rhombus with perimeter 68 and one diagonal 30

sides 6 and 10

10. The legs of an isosceles trapezoid are 10cm. The bases are 9cm and 21cm. Find the area of the

trapezoid and the lengths of the diagonals.

11. In the triangle below, M is the midpoint of . What can be said of the area of  and how it

 relates to the area of ? Why?



12. a) find the area of the triangle in terms of a and b

b) find the area of the triangle in terms of c and h

c) solve for h in term of the other variables

d) a right triangle has legs 6 and 8. Find the lengths of the altitude and the median to the hypotenuse.

**PS 9:**

***For 1-12, complete the tables for the regular polygons. In these tables, P represents the perimeter and A represents the area.***





(1-4) (5-8)

|  |  |  |  |
| --- | --- | --- | --- |
| r | a | p | A |
| 6 | ? | ? | ? |
| ? | 4 | ? | ? |
| ? | ? | 12 | ? |
| ? | ? |  | ? |

|  |  |  |
| --- | --- | --- |
| r | a | A |
|  | ? | ? |
| ? | 5 | ? |
| ? | ? | 49 |
| ? |  | ? |



|  |  |  |  |
| --- | --- | --- | --- |
| r | a | p | A |
| 4 | ? | ? | ? |
| ? |  | ? | ? |
| ? | 6 | ? | ? |
| ? | ? |  | ? |

(9-12)

***Find the area of each regular polygon.***

13. A square with radius 8k

14. A hexagon with apothem 4

15. A pentagon with radius 10 (to nearest tenth)

16. a decagon inscribed in a circle with radius of 1 (4 significant digits)